

ISTMT Test Report

For

Integratech

Heerstraat 16, 3294 Molenstede, Belgium

HWDP

Model Name(s):

HWDP-60154HO

Representative (Tested) Model:

HWDP-60154HO

Model Difference: N/A

Prepared by:

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Engineer: Alan Wang

Date: 2022-05-08

Reviewed by:

Vincent Yuan

Technical Lead: Vincent Yuan

Issue Date: 2022-05-20

Revised Date: N/A

Note:

1. The results contained in this report pertain only to the tested samples.
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Tel: 86-769-22212079

Website: <http://www.ntc-cert.com>

Client Information:

Applicant Name:	Integrattech
Brand Name:	 Less energy more light.

Product Information:

Model Number:	HWDP-60154HO
Product Type:	HWDP
Rating Input:	200-240Vac, 50/60Hz, 60W
Declared Lifetime:	50000 hours
LED Manufacturer:	Hongli Zhihui Group Co., Ltd. Guangzhou Branch
LED Model:	HL-A-2835HW-2-S1-08L-HR3
LED Quantity:	288 pcs
LED Driver Manufacturer:	Dongguan BOKE LED Driver Co., LTD
LED Driver Model:	BK-CWL060-1500A

Test Information:

Date of Receipt Samples:	2022-04-28
Quantity of Receipt Samples:	1 pc
Sample Number:	220428003-S1
Test Representation:	N/A

Laboratory Information:

Test Laboratory:	Dongguan New Testing Centre Co., Ltd
Laboratory Address:	3F, No. 1 the 1 st North Industry Road, Songshan Lake Science & Technology Park, Dongguan, Guangdong, China
Laboratory Contact Name:	Neil Zhong
Laboratory Contact E-mail:	Neil_zhong@ntc-cert.com

Report Information:

Test Report Form:	ISTMT_TRF_V1.5
Issued Date of Test Report:	2022-05-20
Revised Date of Test Report:	N/A
Test Report No.:	NTCLR22040003
Remark (If applicable):	N/A

Test Specification:	
Date of Test	2022-05-07
Test Item	1. In-Situ Temperature Measured Test (ISTMT)
Reference Standard	ANSI/UL 1598 Luminaire ANSI/UL 1598C Light-Emitting Diode (LED) Retrofit Luminaire Conversion Kits ANSI/UL 153 Standard Portable Electric Luminaires IES LM-84-14 IES Approved Method for Measuring Luminous Flux and Color Maintenance of LED Lamps, Light Engines, and Luminaires

Test Methods:
<p>1. In-Situ Temperature Measurement Test (ISTMT)</p> <p>According to UL 1598 and IES LM-84-14, Annex A, maximum LED source operated temperature measurements were taken on one test sample per model with a thermocouple and temperature meter. The SSL sample could reach thermal equilibrium for at least 3 hours before measurements were taken. LED source temperature was measured at the point as indicated by the included diagram in accordance with manufacturers declared hot spot location. The maximum temperature was recorded for the sample. A simulated ceiling or other enclosure may be used in accordance to UL 1598 as applicable.</p>

In-Situ Temperature Measurement Test Results:

Electrical Data:

Voltage (V)	Frequency (Hz)	Current (A)	Wattage (W)	Power Factor	Orientation	Test Time (hours)
230.0	50	0.2459	55.65	0.9841	Face Down	3.5

Test Result:

TC Location	LED Drive Current (mA)	Temperature (°C)			TM-21 Result Reported (hours)	
		Ambient	Test Result	Corrected to 25°C	L70	L90
TMP _{LED}	60.0	25.0	49.0	49.0	>54000	>54000
TMP _{Driver}	N/A	25.0	69.4	69.4	N/A	

Test Result from TM-21:

L70

In-Situ Inputs

Drive current for each LED package/array/module (mA):	60
In-situ case temperature (T _c , °C):	49
Percentage of initial lumens to project to (e.g. for L ₇₀ , enter 70):	70

Results

Time (t) at which to estimate lumen maintenance (hours):	50,000
Lumen maintenance at time (t) (%):	91.68%
Reported L70 (hours):	>54000

L90

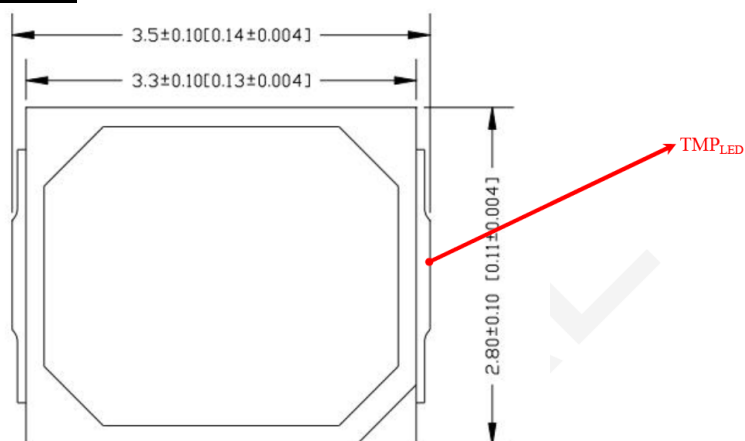
In-Situ Inputs

Drive current for each LED package/array/module (mA):	60
In-situ case temperature (T _c , °C):	49
Percentage of initial lumens to project to (e.g. for L ₇₀ , enter 70):	90

Results

Time (t) at which to estimate lumen maintenance (hours):	50,000
Lumen maintenance at time (t) (%):	91.68%
Reported L90 (hours):	>54000

TMP Position in LM-80:



All dimensions are in millimeter

Thermocouple Position on TMP:

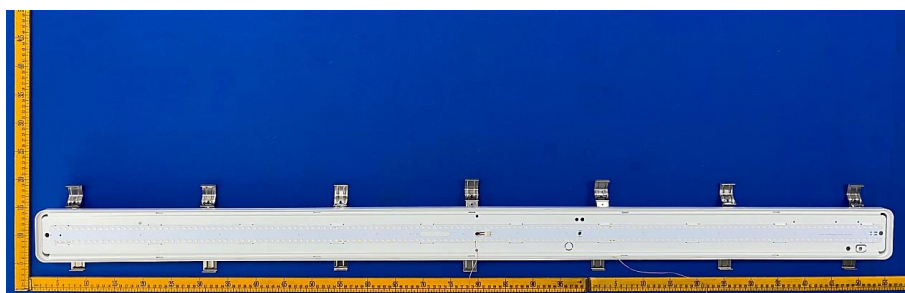
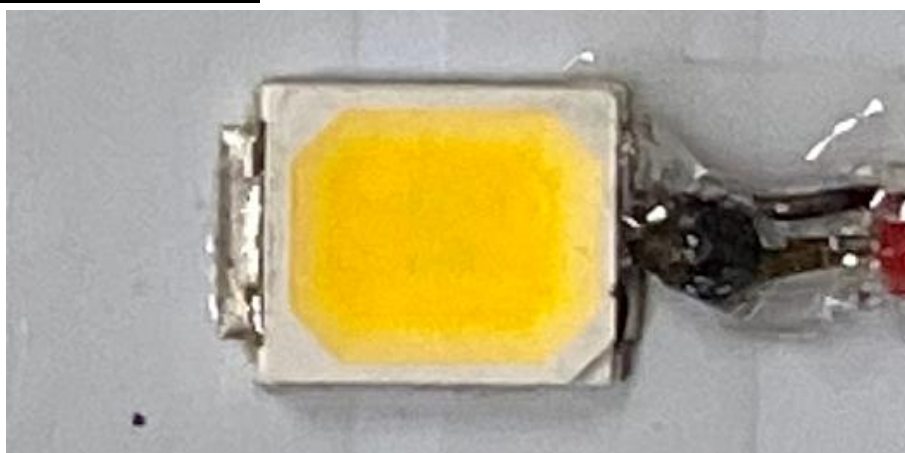


Photo of Sample:



Equipment List:

Equipment ID	Equipment Name	Last Cal.	Due Cal.
NTC-F01-031	Digital Power Meter	2021-08-22	2022-08-21
NTC-F01-020	Temperature & Humidity Meter	2021-11-15	2022-11-14
NTCD-S001	Temperature Data Logger	2021-11-17	2022-11-16

*******End of Report*******